SF2012H-B IP Camera

User's Manual

Dec. 2011

WARINGS

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MISTURE.

DO NOT INSERT ANY METALLIC OBJECT THROUGH VENTILATION GRILLS.

CAUTION

	CAUTION RISK OF ELECTRIC SHOCK DO NOT OPEN	

CAUTION：TO REDUCE THE RISK OF ELECTRIC SHOCK.
DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

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I. Preface

This is a 2M-Pixel CMOS IP camera with the web server built in. User can view real-time video via IE browser. It supports H.264, JPEG and MPEG4 (3GPP only) video compression which provides smooth and high video quality. The video can be stored in the SD card and playback remotely.
With user friendly interface, it is an easy-to-use IP camera which is designed for security application.

II. Product Specifications

- Support video out
- High Definition 30FPS support(720P)
- IP66
- 2M-Pixel CMOS Sensor
- Power over Ethernet available
- IR LED Built in 20M available
- Mechanism IR Cut Filter Available
- H.264/ MJPEG/ MPEG4 (3GPP Only) Compression Format
- SD Card backup
- 2-way audio
- Support Cell phone/PDA/3GPP
- SDK for Software Integration
- Free Bundle 36 Channel Recording Software

Specifications

Hardware	
CPU	ARM 9 ,32 bit RISC
RAM	256MB
Flash	16MB
Image Sensor	1/3” CMOS(2M-Pixel)
Support DC IRIS	Yes
Lens Type	Vari-focal 3.6~16mm Lens
ICR	Mechanism IR cut Filter
LED	Built-in 35 IR LED
	IR Distance-20M
I/O	1 in/ 1 Relay Out
Video Out	x1
Audio In	x1
Audio Out	x1
Power over Ethernet	Yes
Power Consumption	DC 12V
Dimensions	∮ 83mm * H180mm

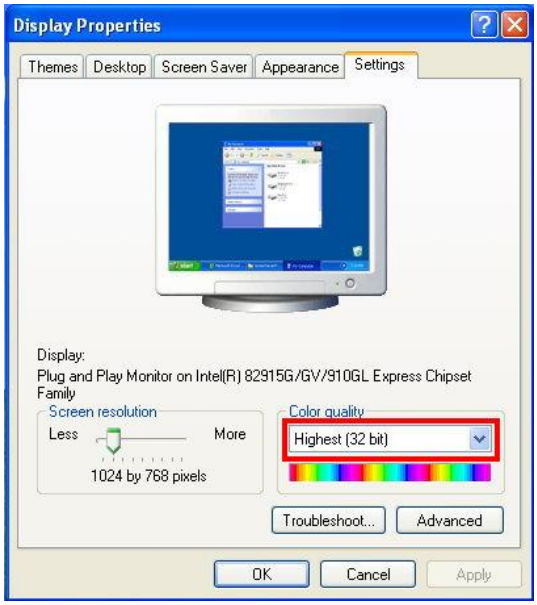
Network	
Ethernet	10/ 100 Base-T
Network Protocol	HTTP, TCP/ IP, UDP, SMTP, FTP, PPPoE, DHCP, DDNS, NTP, UPnP, 3GPP
System	
Video Resolution	1600x1200, 1280x1024, 1280x960,1280x720, 800x600,640x480, 320x240, 176x144
Video Adjust	Brightness, Contrast, Sharpness, BLC, Night Mode
Triple Streaming	Yes
Image Snapshot	Yes
Full Screen Monitoring	Yes
Privacy Mask	Yes, 3 different areas
Compression Format	H.264/ JPEG/ MPEG4 (3GPP only)
Video Bitrates Adjust	CBR, VBR
Motion Detection	Yes, 3 different areas
Triggered Action	Mail, FTP, Save to SD card, Relay
Pre/ Post Alarm	Yes, configurable
Security	Password protection
Firmware Upgrade	HTTP mode, can be upgraded remotely
Simultaneous Connection	Up to 10
Audio	Yes, 2-way
SD card management	
Recording Trigger	Motion Detection, IP check, Network break down (wire only),Schedule, Relay
Video Format	AVI, JPEG
Video Playback	Yes
Delete Files	Yes
Web browsing requirement	
OS	Windows 2000, XP, Vista, 7 Microsoft IE 6.0 or above
Hardware	
Suggested	Intel Dual Core 1.66G,RAM: 1024MB, Graphic card: 128MB
Minimum	Intel-C 2.8G, RAM: 512MB, Graphic card: 64MB

III. Product Installation

A. Monitor Setting

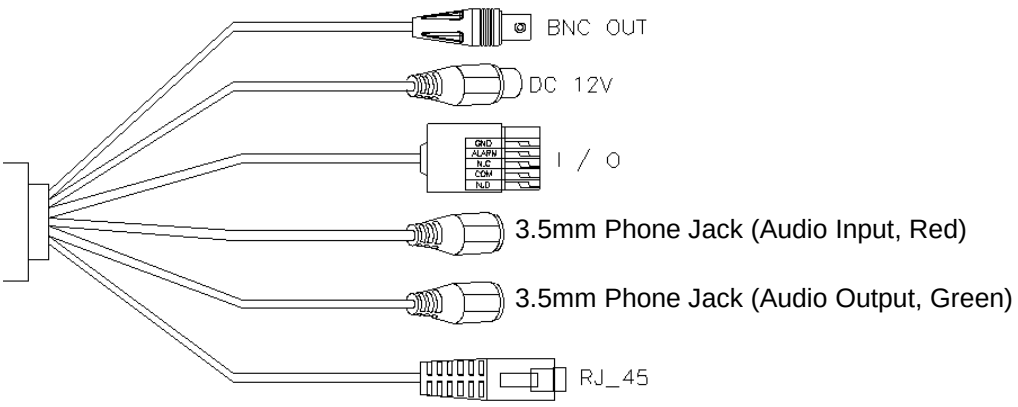
1. Right-Click on the desktop. Select " **Properties**"

2. Change color quality to highest (32bit).



B. Hardware Installation and I/O Pin Assignment

1. Connect a power adapter and IP Camera to PC or local network.



2. I/O Control Instruction

I/O terminal connector – used in application, for e.g., motion detection, event triggering, alarm notifications. It provides the interface to:

1 Digital Input (GND+Alarm) – An alarm input for connecting devices that can toggle between an open and closed circuit, for example: PIRs, door/window contacts, glass break detectors, etc. When a signal is received the state changes and the input becomes active.

Relay output (COM +N.O.) / (COM+N.C.) – An output to Relay switch, for example: LEDs, Sirens, etc

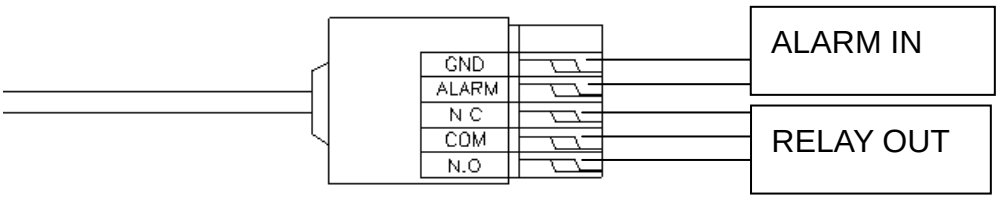
Digital Input

Alarm Input

1. GND (Ground) : Initial state is LOW
2. Alarm : Max. 50mA, DC 3.3V

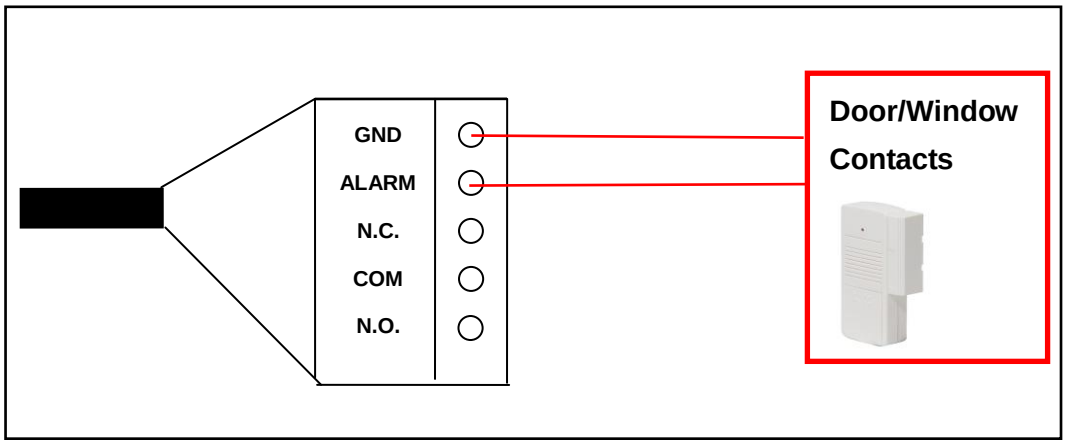
Relay Output

1. N.C. (Normally Close): Max. 1A, 24VDC or 0.5A, 125VAC
2. COM: (Common)
3. N.O. (Normally Open): Max. 1A, 24VDC or 0.5A, 125VAC

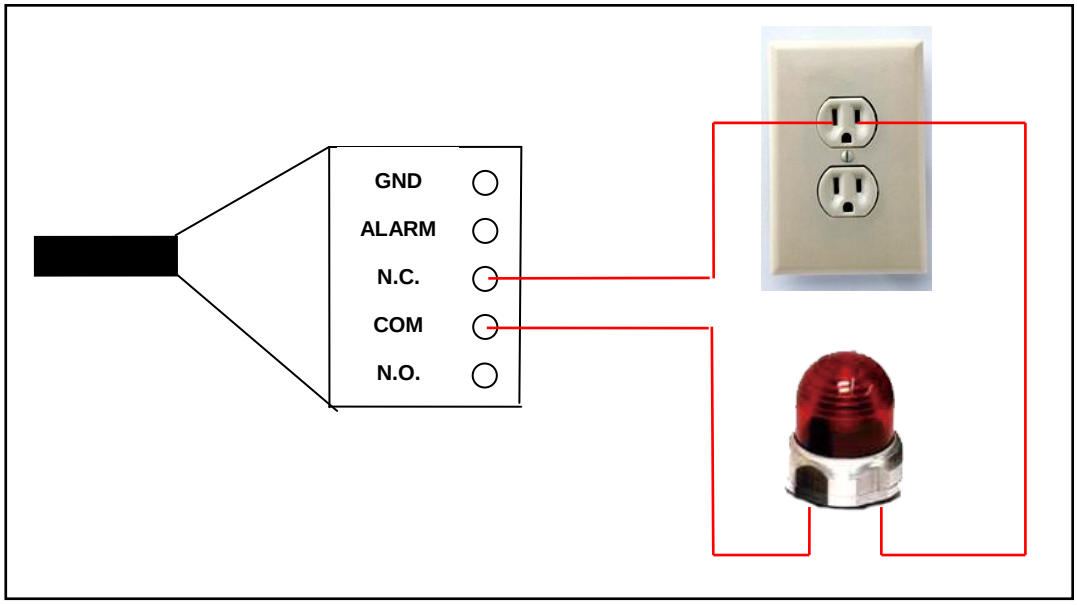


Relay

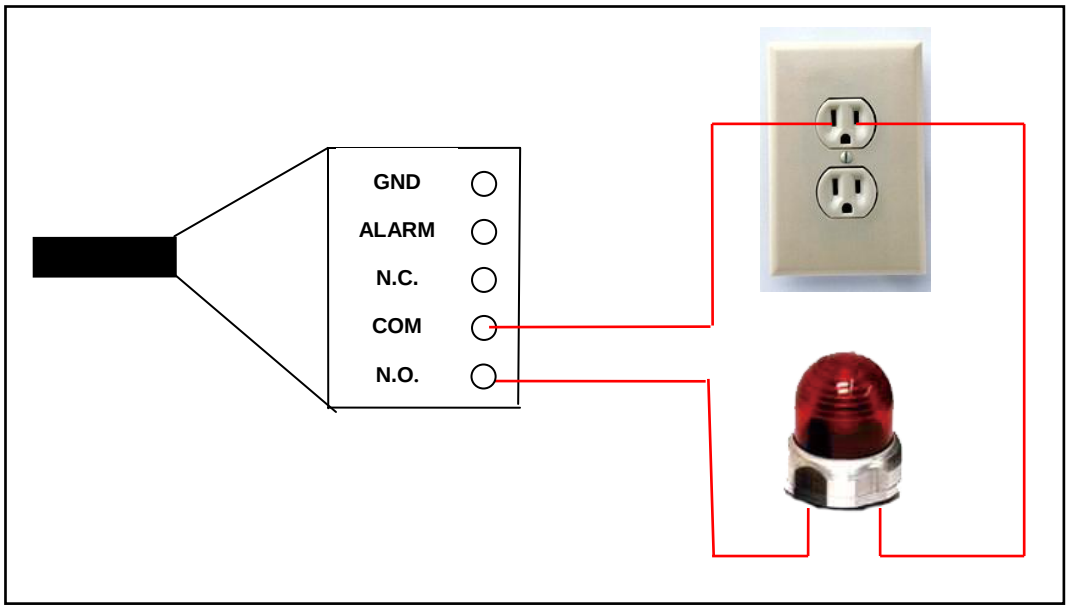
1. Digital Input connection



2. Relay Output Connection



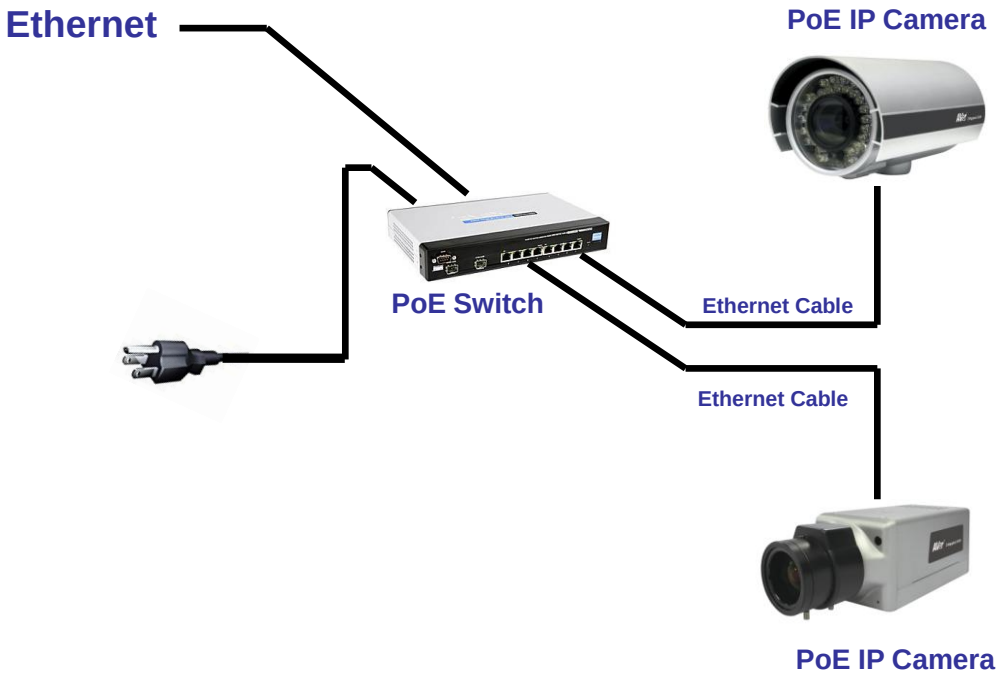
OR



3. PoE (Power Over Ethernet)

[Note] 802.3af, 15.4W PoE Switch is recommended

Power over Ethernet (PoE) is a technology that integrates power into a standard LAN infrastructure. It enables power to be provided to the network device, such as an IP phone or a network camera, using the same cable as that used for network connection. It eliminates the need for power outlets at the camera locations and enables easier application of uninterruptible power supplies (UPS) to ensure 24 hours a day, 7 days a week operation.

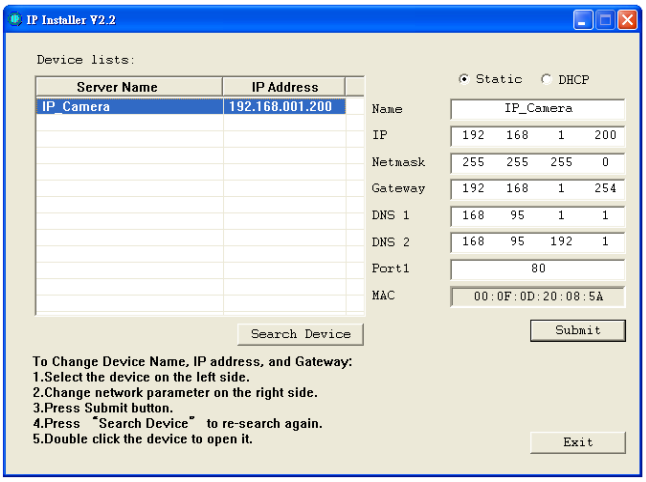


C. IP Assignment

1. Use the software, “**IP Installer**” to assign the IP address of IP CAMERA. The software is in the attached software CD.
2. IP installer supports two languages
   - **IPInstallerCht.exe:** Chinese version
   - **IPInstallerEng.exe:** English version
3. There are 3 kinds of IP configuration.
   - Fixed IP (Public IP or Virtual IP)
   - DHCP (Dynamic IP)
   - Dial-up (PPPoE)
4. Execute IP Installer
5. For Windows XP SP2 user, it may popup the following message box. Please click “**Unblock**”.

Windows Security Alert
To help protect your computer, Windows Firewall has blocked some features of this program.
Do you want to keep blocking this program?
Name: IPInstaller V2.1 Network Device Scan
Publisher: Unknown
Keep Blocking
Unblock
Ask Me Later
Windows Firewall has blocked this program from accepting connections from the Internet or a network. If you recognize the program or trust the publisher, you can unblock it. When should I unblock a program?

IP Installer configuration:



6. IP Installer will search all IP Cameras connected on Lan. The user can click “**Search Device**” to search again.
7. Click one of the IP Camera listed on the left side. The network configuration of this IP camera will show on the right side. You may change the “name” of the IP Camera to your preference (eg: Office, warehouse). Change the parameter and click “**Submit**” then click “**OK**”. It will apply the change and reboot the Device.

8. Please make sure the subnet of PC IP address and IP CAM IP address are the same.

[Example]

The same Subnet:

IP CAM IP address: 192.168.1.200

PC IP address: 192.168.1.100

Different Subnets:

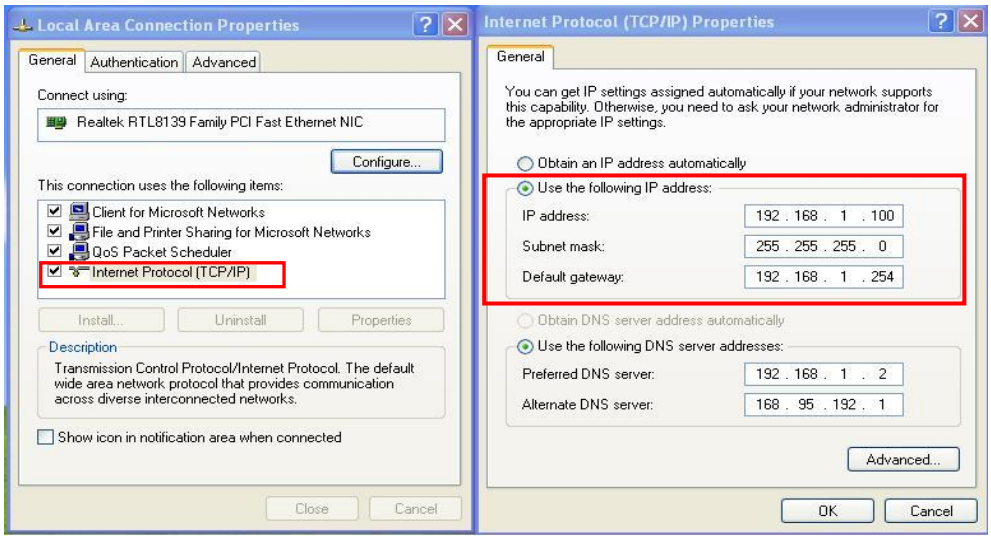
IP CAM IP address: 192.168.2.200

PC IP address: 192.168.1.100

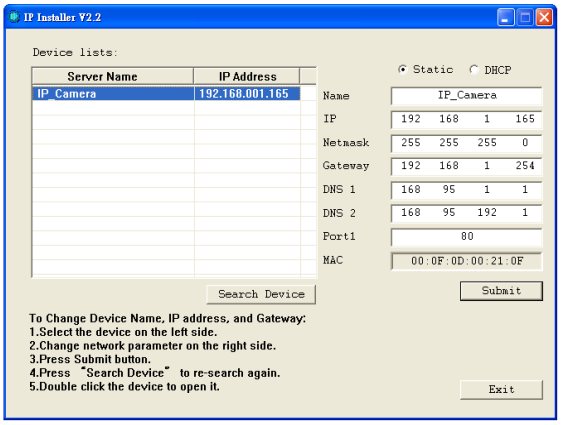
To Change PC IP address:

Control Panel→Network Connections→Local Area Connection Properties→Internet Protocol (TCP/IP) →Properties

Please make sure your IP Camera and PC have the same Subnet. If not, please change IP Camera subnet or PC IP subnet accordingly.


Local Area Connection Properties
General
Authentication
Advanced
Connect using:
Realtek RTL8139 Family PCI Fast Ethernet NIC
Configure...
This connection uses the following items:
Client for Microsoft Networks
File and Printer Sharing for Microsoft Networks
QoS Packet Scheduler
Internet Protocol (TCP/IP)
Install...
Uninstall
Properties
Description
Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks.
Show icon in notification area when connected
Close
Cancel
Internet Protocol (TCP/IP) Properties
General
You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.
Obtain an IP address automatically
Use the following IP address:
IP address: 192 . 168 . 1 . 100
Subnet mask: 255 . 255 . 255 . 0
Default gateway: 192 . 168 . 1 . 254
Obtain DNS server address automatically
Use the following DNS server addresses:
Preferred DNS server: 192 . 168 . 1 . 2
Alternate DNS server: 168 . 95 . 192 . 1
Advanced...
OK
Cancel

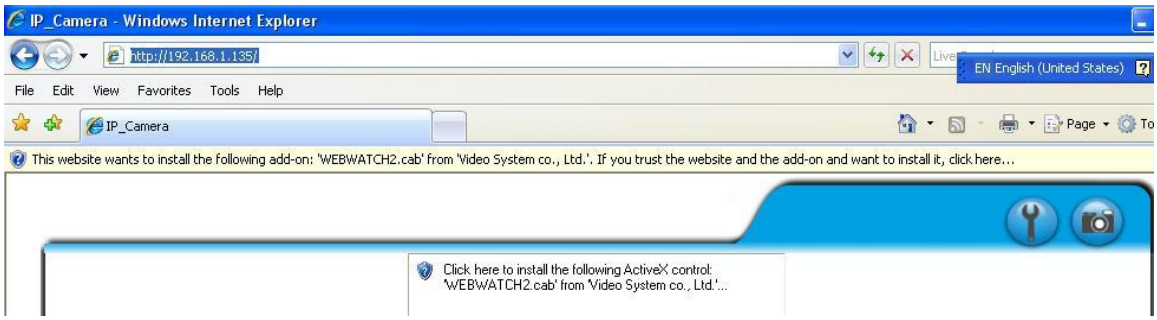
9. A quick way to access remote monitoring is to left-click the mouse twice on a selected IP Camera listed on “Device list” of IP Installer. An IE browser is opened.



10. Then, please key in the default user name and password is “**admin**”.

D. Install ActiveX control

For the first time to view the camera video via IE, it will ask you to install the ActiveX component.

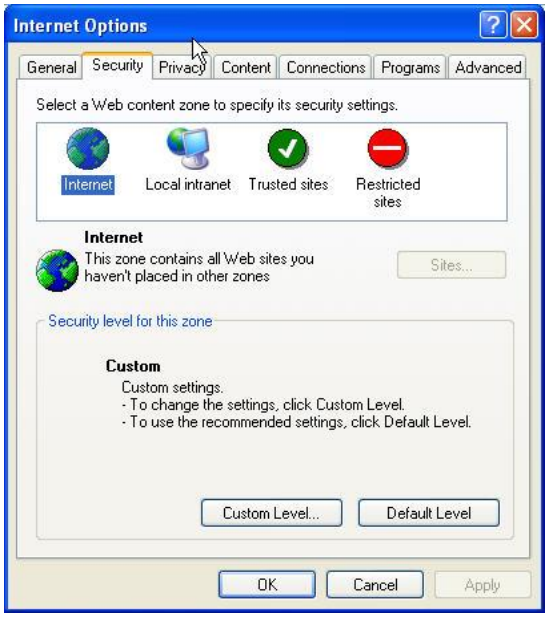

IP_Camera - Windows Internet Explorer
http://192.168.1.135/
File Edit View Favorites Tools Help
IP_Camera
This website wants to install the following add-on: 'WEBWATCH2.cab' from 'Video System co., Ltd.'. If you trust the website and the add-on and want to install it, click here...
Click here to install the following ActiveX control:
'WEBWATCH2.cab' from 'Video System co., Ltd.'...

If the installation failed, please check the security setting for the IE browser.

1. IE → Tools → Internet Options… → Security Tab → Custom Level… → Security Settings → Download unsigned ActiveX controls→ Select “**Enable**” or Prompt.
2. IE → Tools → Internet Options… → Security Tab → Custom Level… →Initialize and script ActiveX controls not marked as safe → Select “Enable” or Prompt.

1

2



3

4

5

When popup the following dialogue box, click “Yes”.

IV. Live Video

Start a IE browser, type the IP address of the IP camera in the address field. It will show the following dialogue box. Key-in the user name and password. The default user name and password are “**admin**” and “**admin**”.

When connect to the IP Camera, the following program interface shows.

(1) : Get into the administration page. We kindly suggest you to close the IE page once you finished the setup.

(2) : Video Snapshot.

(3) Show system time, video resolution, and video refreshing rate

(4) Select the multiplied value to adjust GUI display on screen. The default value is equal to 1/2.

(5) Select video streaming source.

[Note] When streaming 2 setting in"**Video Setting**" is closed, this function will not display.

(6) IP Camera supports 2-way audio. Click the "Chatting" check box. Then you can use microphone which connects to the PC to talk to server side, which is IP Camera side

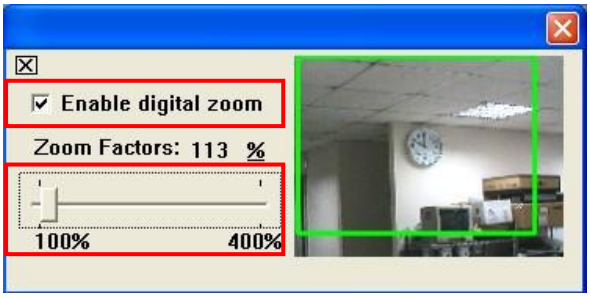
(7) Shows how many people connect to this IP camera

(8) Control the relay which is connected to this camera.

Double-click the video; it will change to full screen mode. Press "**Esc**" or double-click the video again, it will change back to normal mode.

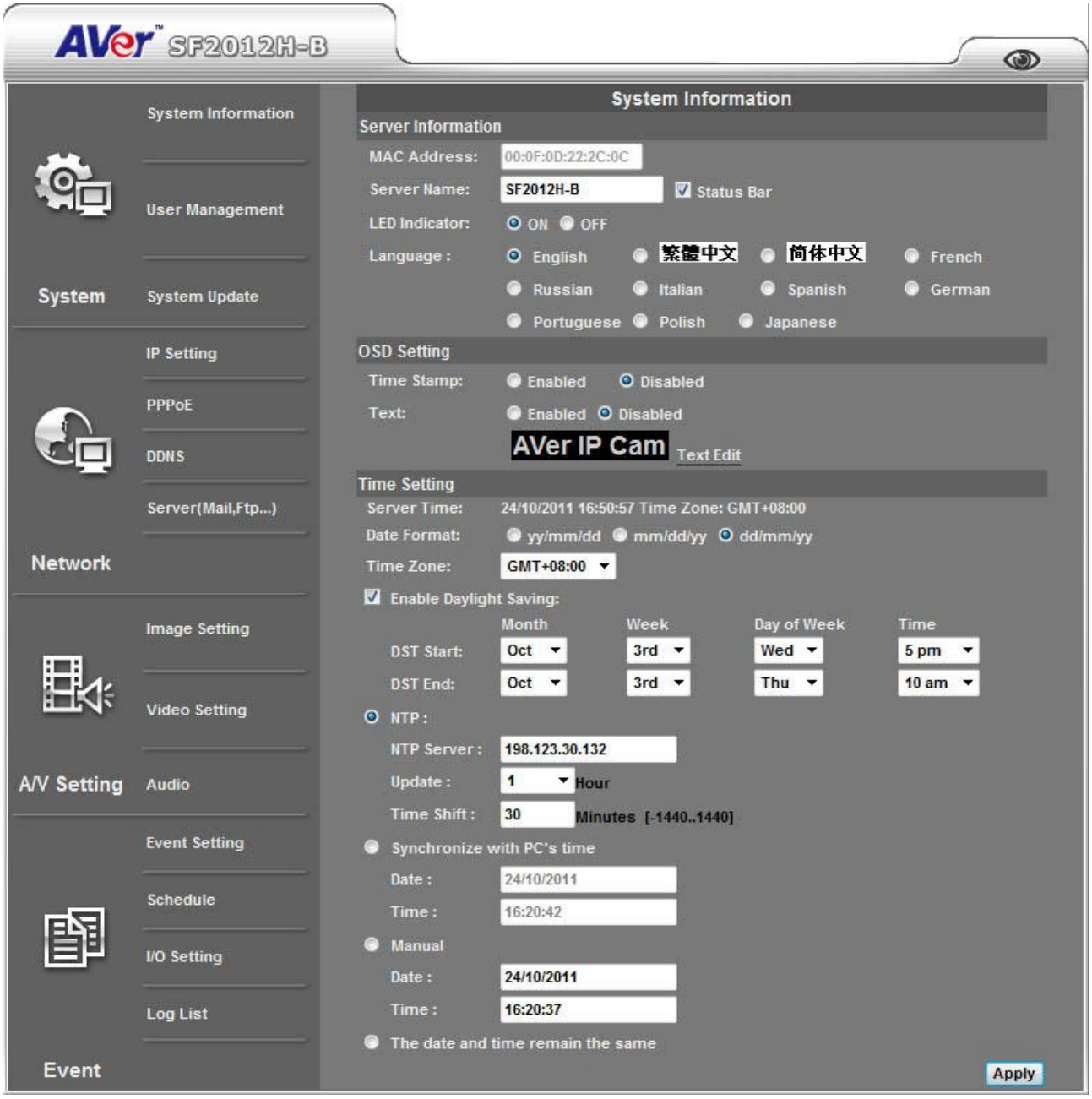
Right-Click the mouse on the video, it will show a pop-up menu.

- **Snapshot:** Save a JPEG picture
- **Record Start:** Record the video in the local PC. It will ask you where to save the video. To stop recording, right-click the mouse again. Select "Record Stop". The video format is AVI. Use Microsoft Media Player to play the recorded file.
- **Mute:** Turn of the audio. Click again to turn on it.
- **Full Screen:** Full-screen mode.
- **ZOOM:** Enable zoom-in and zoom-out functions. Select "**Enable digital zoom**" option first within the pop-up dialogue box and then drag and drop the bar to adjust the zoom factors.



V. Configuration

Click to get into the administration page. Click to go back to the live video page.



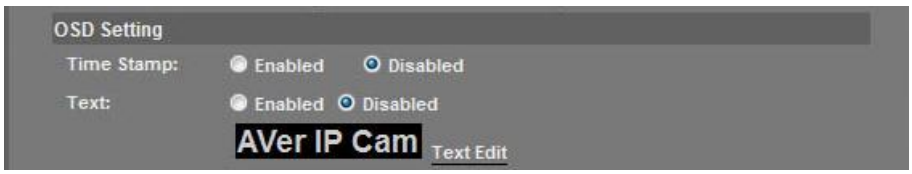
A. System

- **System Information**

a. **Server Information:** Set up the camera name, select language, and set up the camera time.

1. **Server Name:** This is the Camera name. This name will show on the IP Installer.
2. **Select language:** There are English, Traditional Chinese, and Simplified Chinese to select. When change, it will show the following dialogue box for the confirmation of changing language.

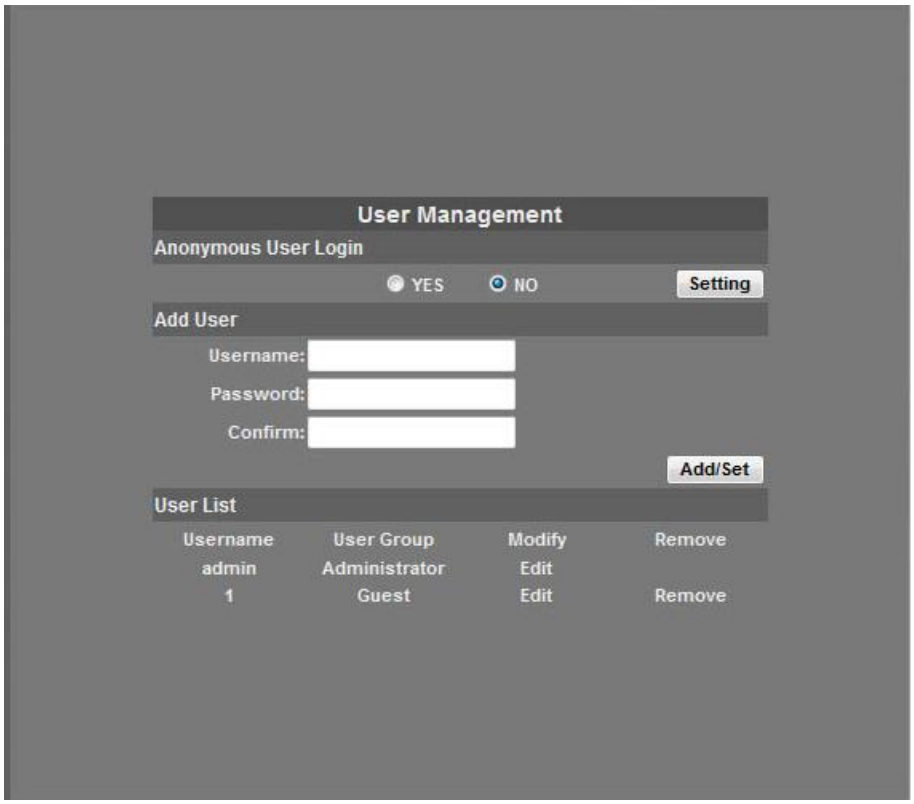
b. **OSD Setting:** Select a position where date & time stamp / text showing on screen.



Moreover, click **Text Edit** can entry to adjust the OSD contents which is including Size and Alpha of text. Finally, click Upgrade button to reserve the setting.

c. **Server time setting:** Select options to set up time - “NTP”, “Synchronize with PC’s time”, “Manual”, “The date and time remain the same”.

- **User Management:** IP camera supports three different users account -- administrator, general user, and anonymous user.

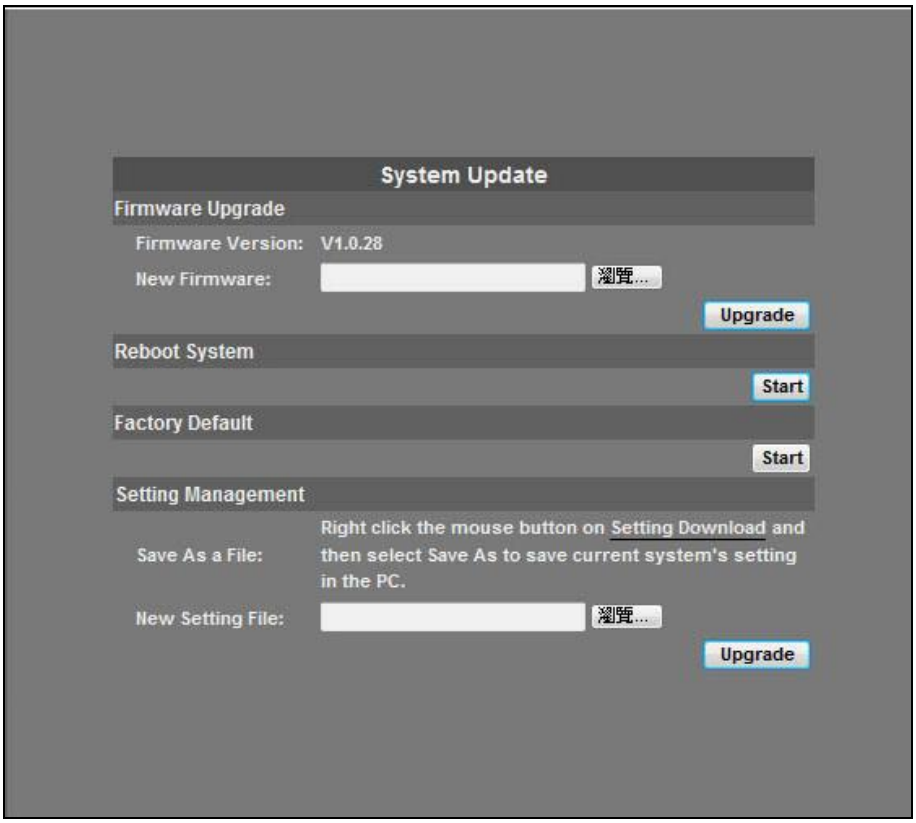


a. Anonymous User Login
   - ✓ **Yes:** Allow anonymous login
   - ✓ **No:** Need user name & password to access this IP camera

b. **Add user:** Type the user name and password, then click **"Add/Set**".

c. **User List:** Click "**edit**" or "**delete**" to modify the user.

■ System update



a. To update the firmware online, click "**Browse…**" to select the firmware. Then click "Upgrade" to proceed.

b. **Reboot system:** re-start the IP camera

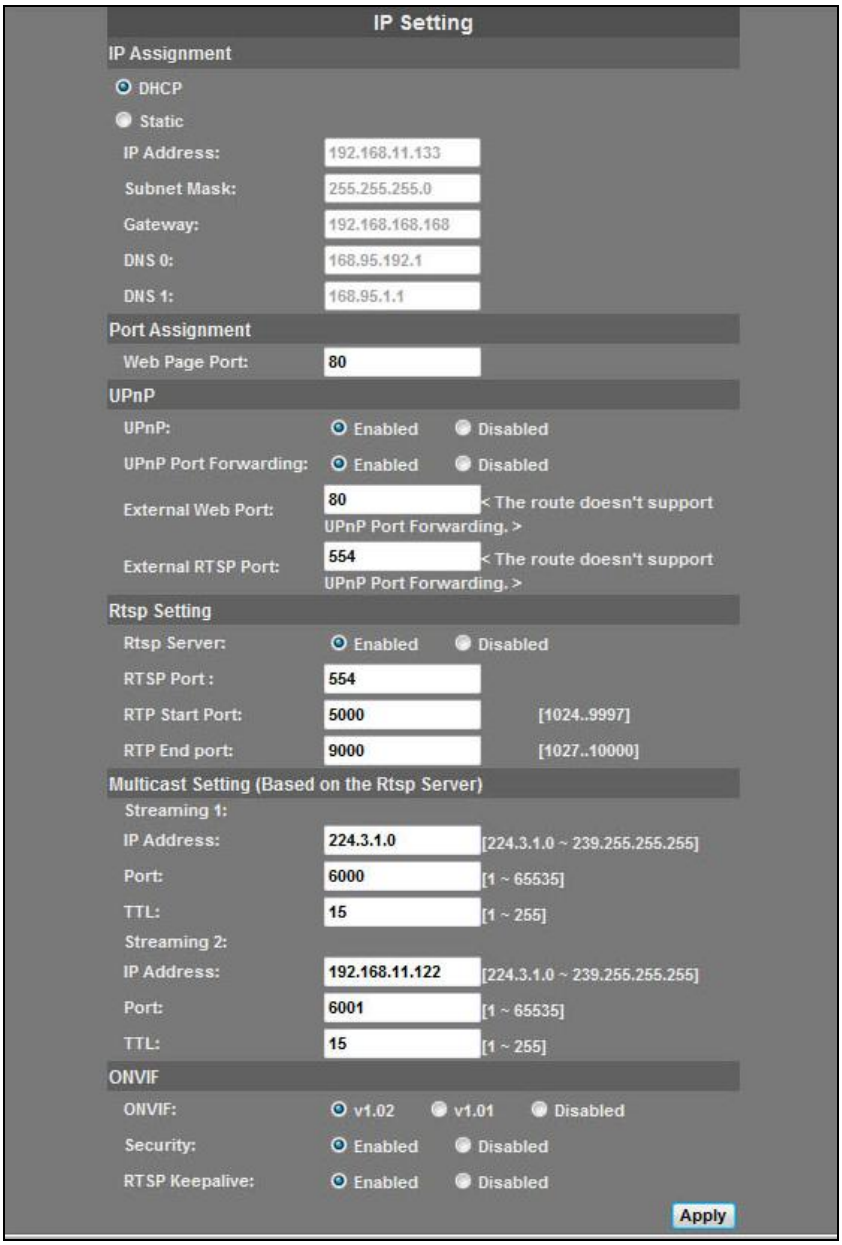
c. **Factory default:** delete all the settings in this IP camera.

d. **Setting Management:** User may download the current setting to PC, or upgrade from previous saved setting.

- ✓ Setting download: Right-click the mouse button on Setting Download → Select "Save AS…" to save current IP CAM setting in PC → Select saving directory → Save
- ✓ Upgrade from previous setting: Browse → search previous setting → open → upgrade → Setting update confirm → click **index.html**. to return to main page

B. Network

- **IP Setting:** IP Camera supports DHCP and static IP.



a. **IP Assignment**
   - ✓ **DHCP:** Using DHCP, IP Camera will get all the network parameters automatically.
   - ✓ **Static IP:** Please type in IP address, subnet mask, gateway, and DNS manually.
   - ✓ **Port Assignment:** user may need to assign different port to avoid conflict when setting up IP assignment.

b. **Port Assignment**
   - ✓ **Web Page Port:** setup web page connecting port and video transmitting port (Default: 80)
   - ✓ **RTSP Port:** setup port for RTSP transmitting (Default: 554)
   - ✓ **RTP Start and End Port:** in RTSP mode, you may use TCP and UDP for connecting. TCP connection uses RTSP Port (554). UDP connection uses RTP Start and End Port.

c. **UPnP**

   This IP camera supports UPnP, if this service is enabled on your computer, the camera will

automatically be detected and a new icon will be added to “My Network Places.”

[Note] UPnP must be enabled on your PC.

Please follow the procedure to activate UPnP.

1. Open the **Control Panel** from the Start Menu.
2. Select **Add/Remove Programs**.
3. Select Add/Remove Windows Components and open Networking Services section.
4. Click **Details** and select **UPnP** to setup the service.
5. The IP device icon will be added to “**My Network Places**”.
6. User may double click the IP device icon to access IE browser.

d. **Rtsp Setting**

The Real Time Streaming Protocol (RTSP) is a network control protocol designed for use in entertainment and communications systems to control streaming media servers.

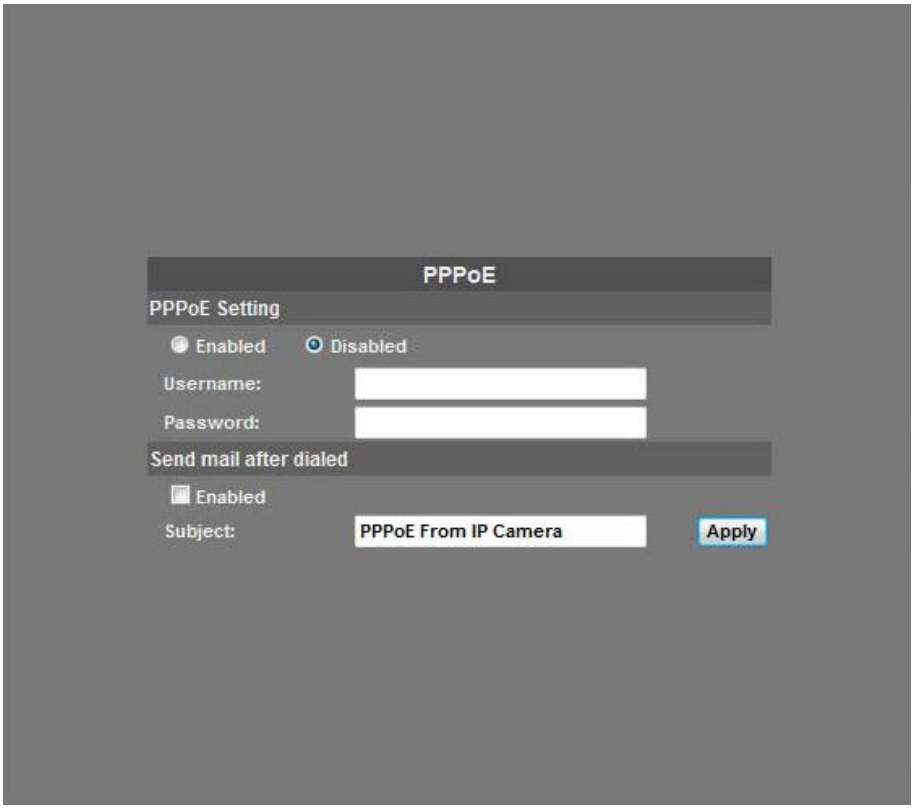
e. **Multicast Setting (based on the Rtsp Server)**

User can setup two streaming based on the Rtsp Server.

f. **ONVIF**

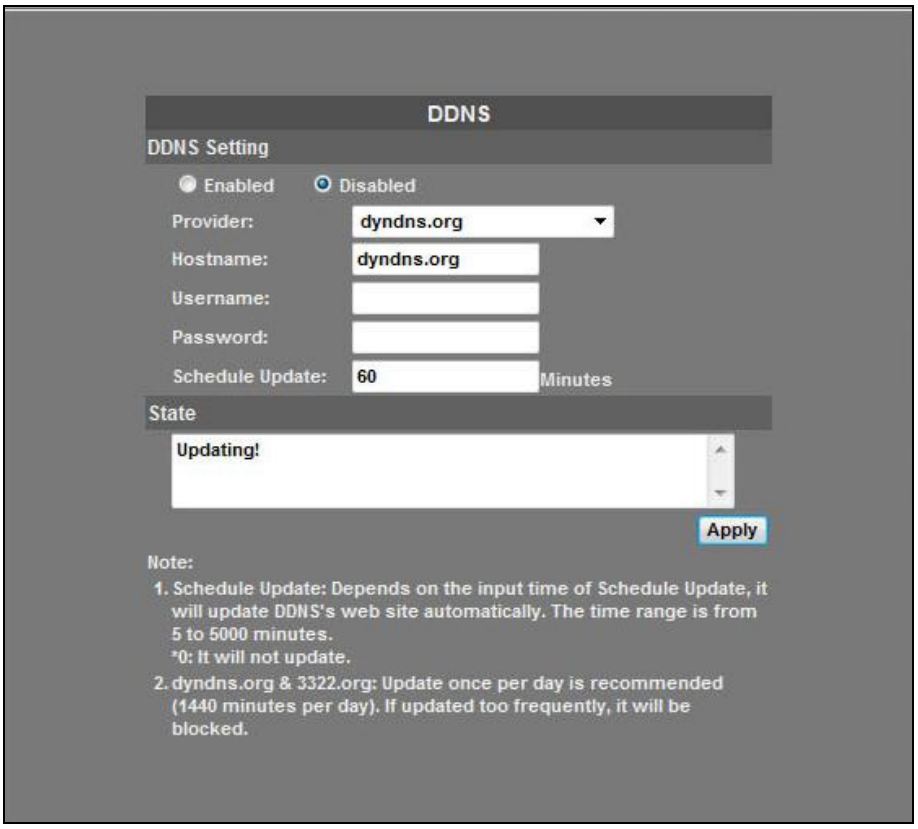
User can enable ONVIF standard and select the ONVIF version or disable it.

■ PPPoE



- Select “**Enabled**” to use PPPoE.
- Enter the **Username** and **Password** for the ADSL connection.
- Send mail after dialed：When connect to the internet, it will send a mail to a specific mail account. For the mail setting, please refer to “Mail and FTP” settings.

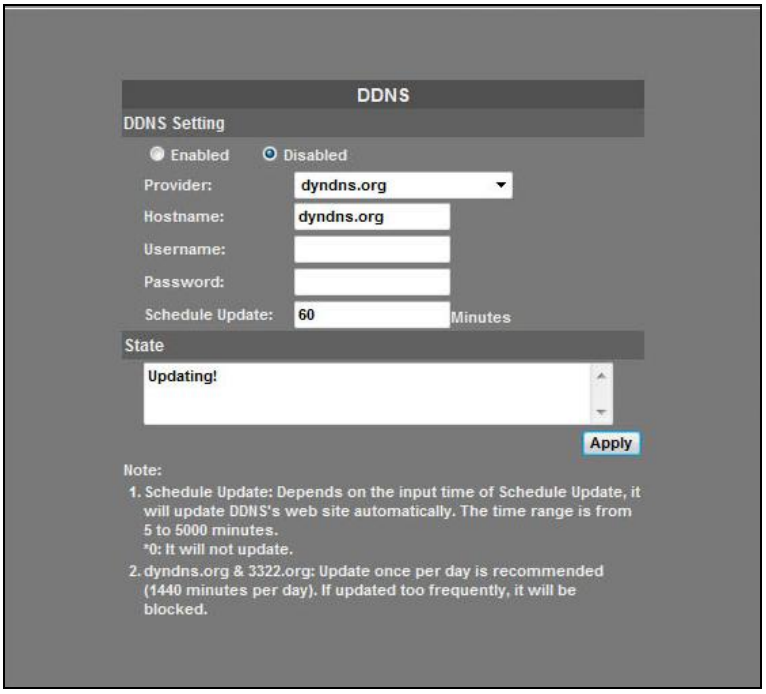
- **DDNS:** It supports DDNS (Dynamic DNS) service.
  - ✓ **DynDNS**



  - Enable DDNS function.
  - Enter the Host name, Username, and Password of DynDNS.
  - Set up the IP Schedule update refreshing period.
  - Click "**Apply**".

  [Note] If setting up IP schedule update too frequently, the IP may be blocked. In general, schedule update every day (1440 minutes) is recommended.

✓ **Camddns service**



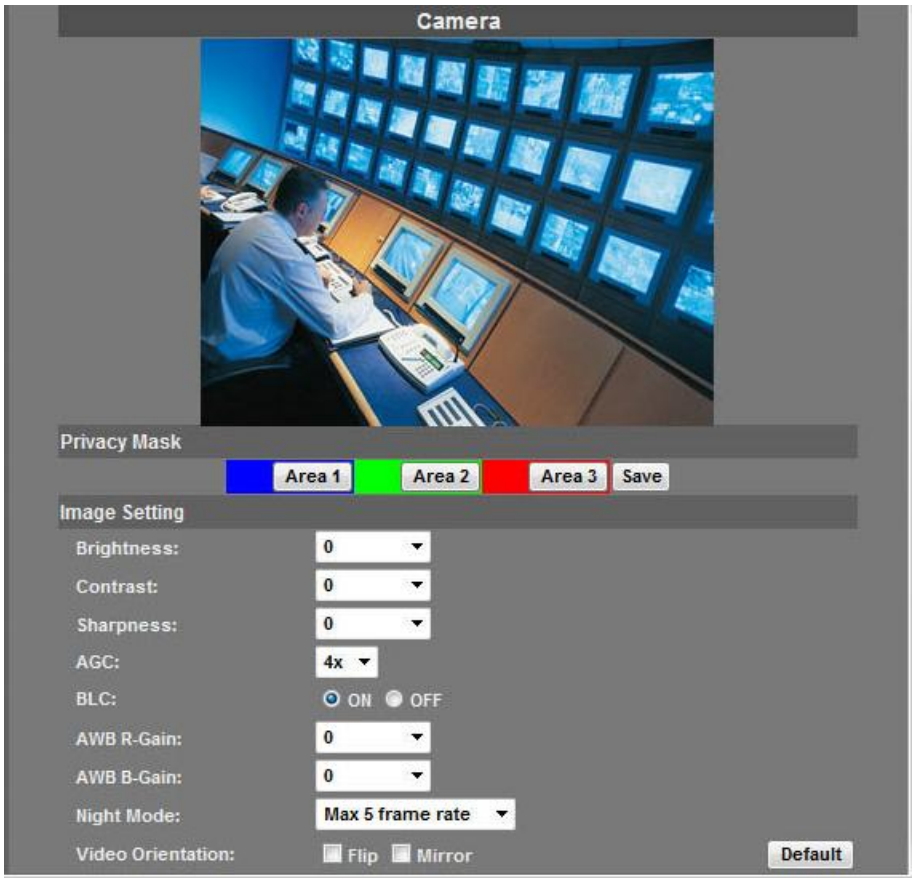
1. Please enable this service
2. Key-in user name.
3. IP Schedule update is default at 5 minutes
4. Click "**Apply**".

✓ **DDNS Status**

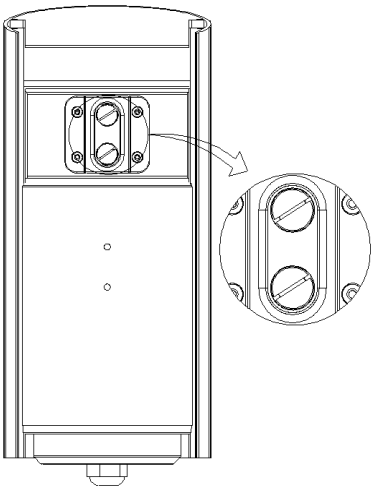
1. Updating: Information update
2. Idle: Stop service
3. DDNS registration successful, can now log by http://<username>.ddns.camddns.com: Register successfully.
4. Update Failed, the name is already registered：The user name has already been used. Please change it.
5. Update Failed, please check your internet connection: Network connection failed.
6. Update Failed, please check the account information you provide: The server, user name, and password may be wrong.

C. A/V Setting

- Image Setting



For the security purpose, there are three areas can be setup for privacy mask. Click Area button first and pull a area on the above image. Finally, click Save button to reserve the setting.
Adjust “Brightness”, “Contrast”, “Hue”, “Saturation” to get clear video.
Adjust “Brightness”, “Contrast”, “Hue”, “Saturation” to get clear video. Moreover, IP CAMERA supports “Back Light Compensation”, “Night Mode” and “Video Orientation”.
This IP camera belongs to external varifocal lens adjustment camera. Please adjust “**ZOOM**” first and “**FOCUS**” in the following to complete the adjustment.



■ Video Setting

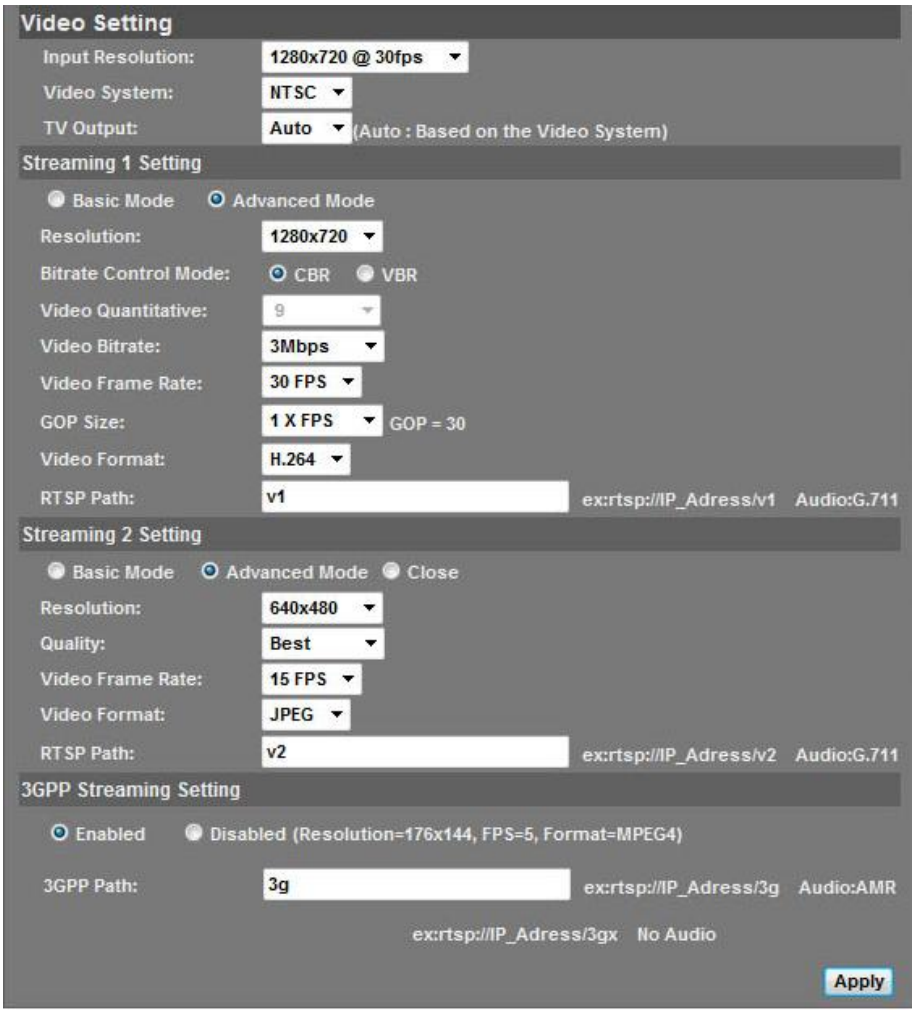
User may select 2 streaming output simultaneously:

Streaming 1 Setting: Basic mode and Advanced mode

Streaming 2 Setting: Basic mode, Advanced mode, and 3GPP mode

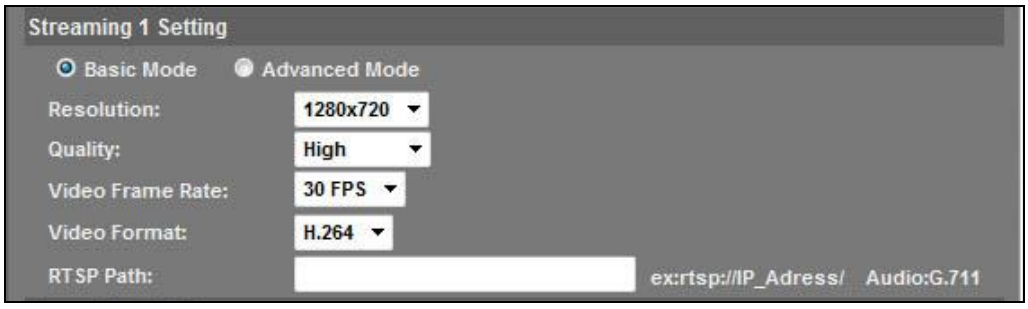
[Note] Max Video Frame Rate for both streaming combined is 30 FPS

a. **Video System:** click the drop down list to select the video system type -- Input Resolution, Video System or TV Output.


Video Setting
Input Resolution: 1280x720 @ 30fps
Video System: NTSC
TV Output: Auto (Auto : Based on the Video System)
Streaming 1 Setting
Basic Mode Advanced Mode
Resolution: 1280x720
Bitrate Control Mode: CBR VBR
Video Quantitative: 9
Video Bitrate: 3Mbps
Video Frame Rate: 30 FPS
GOP Size: 1 X FPS GOP = 30
Video Format: H.264
RTSP Path: v1 ex:rtsp://IP_Adress/v1 Audio:G.711
Streaming 2 Setting
Basic Mode Advanced Mode Close
Resolution: 640x480
Quality: Best
Video Frame Rate: 15 FPS
Video Format: JPEG
RTSP Path: v2 ex:rtsp://IP_Adress/v2 Audio:G.711
3GPP Streaming Setting
Enabled Disabled (Resolution=176x144, FPS=5, Format=MPEG4)
3GPP Path: 3g ex:rtsp://IP_Adress/3g Audio:AMR
ex:rtsp://IP_Adress/3gx No Audio
Apply

b. **Streaming 1 Setting**

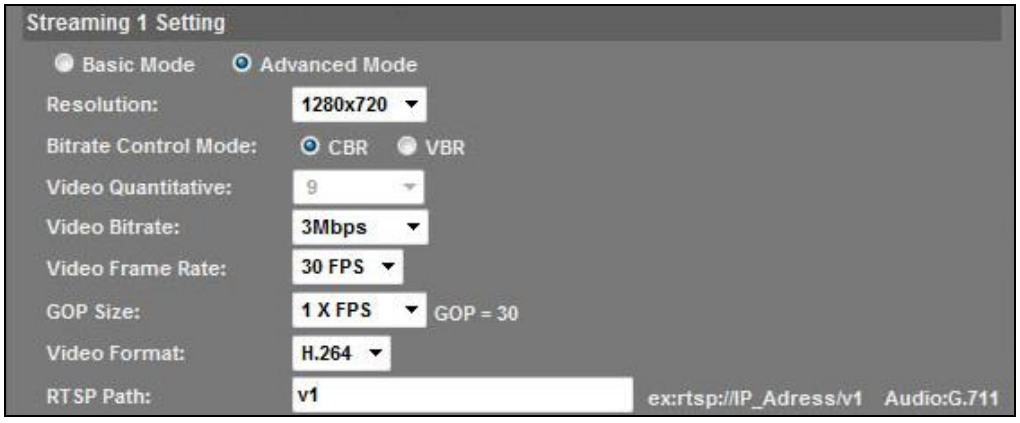
✓ **Basic Mode**



- **Resolution:** There are 8 resolutions can be chosen -- 1600x 1200, 1280x1024, 1280x960, 1280x720, 800x600, 640x480, 320x240, 176x144.
- **Quality:** There are 5 levels to adjust – Best, High, Standard, Medium, and Low. The higher the quality is, the bigger the file size is. Also not good for internet transmitting.

- **Video Frame Rate:** The video refreshing rate per second.
- **Video Format:** H.264 or JPEG.
- **RTSP Path:** RTSP output name.

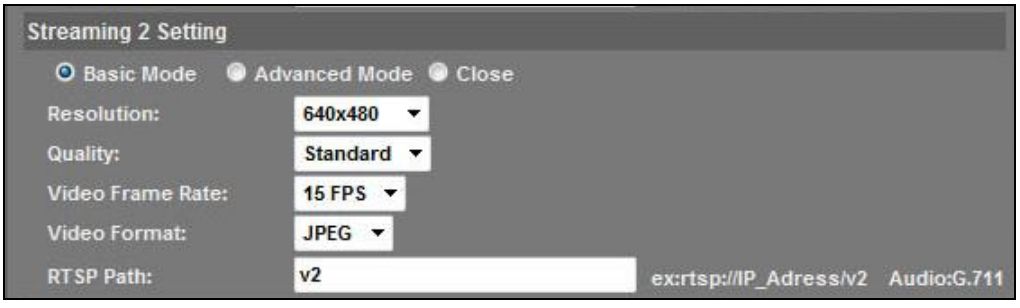
✓ **Advanced Mode**



- **Resolution:** There are 8 resolutions can be chosen.1600x 1200, 1280x1024, 1280x960, 1280x720, 800x600, 640x480, 320x240, 176x144.
- **Bitrate Control Mode:** There are CBR(**Constant** Bit Rate) and VBR(Variable Bit Rate) to use.
  - **CBR:** 32Kbps~4Mbps (the higher the CBR is, the better the video quality is).
  - **VBR:** 1(Low) ~10(High) – Compression rate, the higher the compression rate, the lower the picture quality is; vise versa. The balance between VBR and network bandwidth will affect picture quality. Please carefully select the VBR rate to avoid picture breaking up or lagging.
- **Video Frame Rate:** The video refreshing rate per second.
  - **NTSC:** Max 30 frames/second.
  - **PAL:** Max 25 frames/second.
- **GOP Size:** It means "**Group of Pictures**". The higher the GOP is, the better the quality is.
- **Video Format:** H.264 or JPEG
- **RTSP Path:** RTSP output connecting route

c. **Streaming 2 Setting**

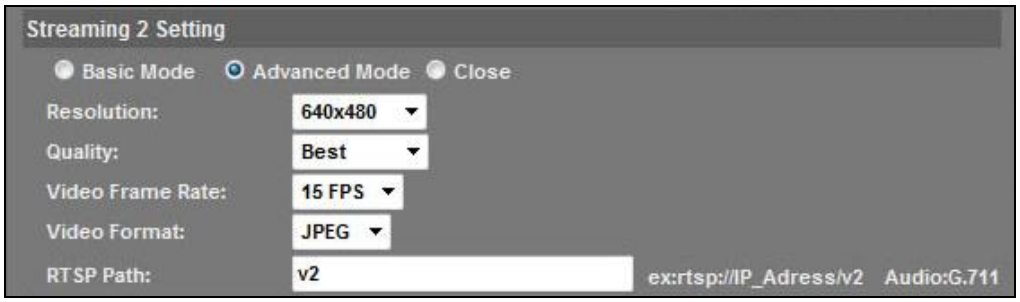
✓ **Basic Mode**



- **Resolution:** There are 8 resolutions can select -- 1600x 1200, 1280x1024, 1280x960, 1280x720, 800x600, 640x480, 320x240, 176x144.
- **Quality:** There are 5 levels to adjust – Best, High. Standard, Medium, and Low. The higher the quality is, the bigger the file size is. Also not good for internet transmitting
- **Video Frame Rate:** The video refreshing rate per second.
- **Video Format:** H.264 or JPEG

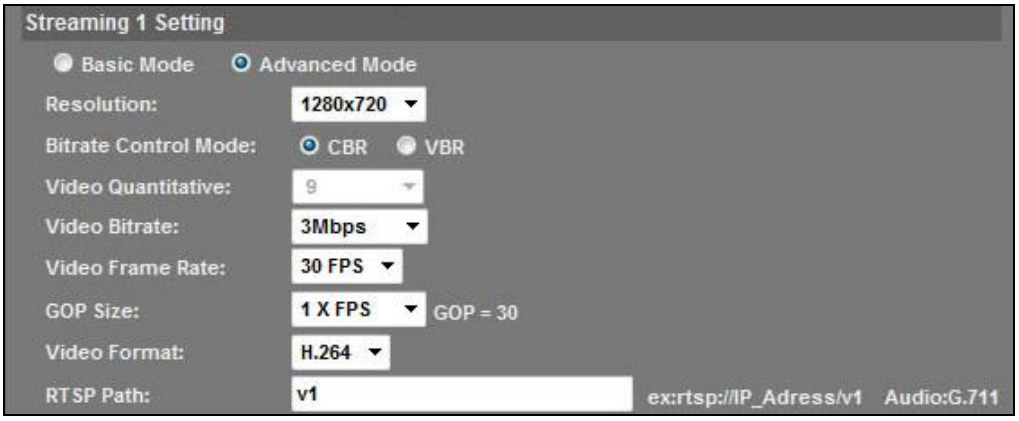
➢ **RTSP Path:** RTSP output connecting route

✓ **Advanced Mode：**



- **Resolution:** There are 8 resolutions can select -- 1600x 1200, 1280x1024, 1280x960, 1280x720, 800x600, 640x480, 320x240, 176x144.
- **Quality:** There are 5 levels to adjust – Best, High. Standard, Medium, and Low. The higher the quality is, the bigger the file size is. Also not good for internet transmitting
- **Video Frame Rate:** The video refreshing rate per second.
- **Video Format:** MPEG4 or JPEG
- **RTSP Path:** RTSP output name

d. **3GPP Streaming mode**

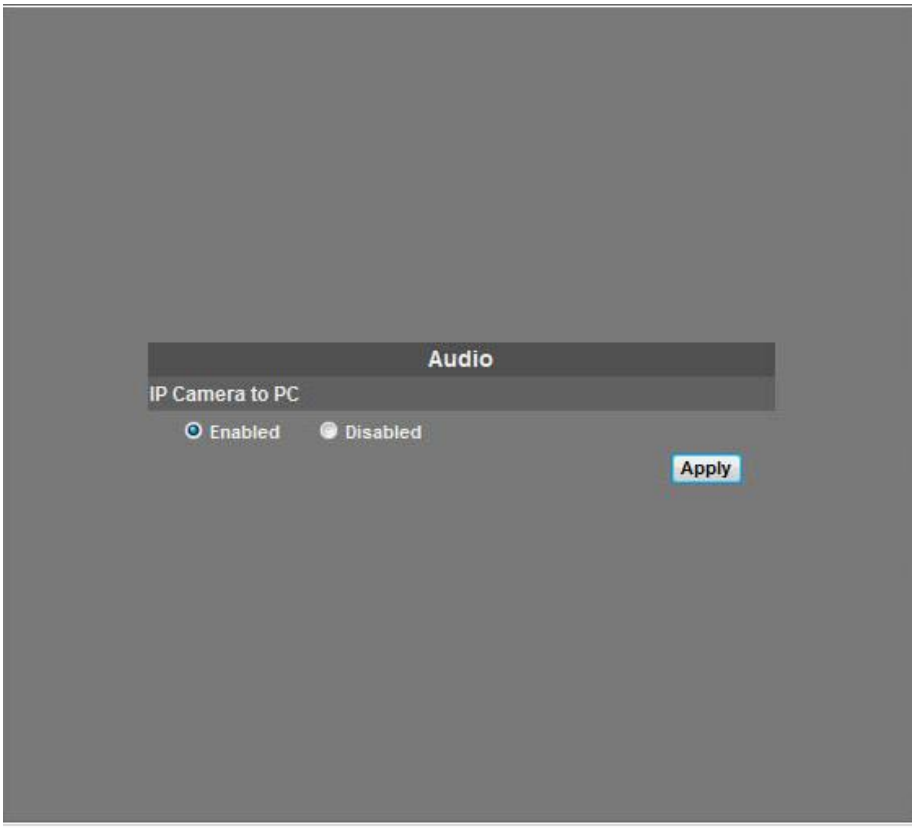


[Note]3GPP mode suggested setting: 176x144 resolution, 5FPS, MPEG4 format.

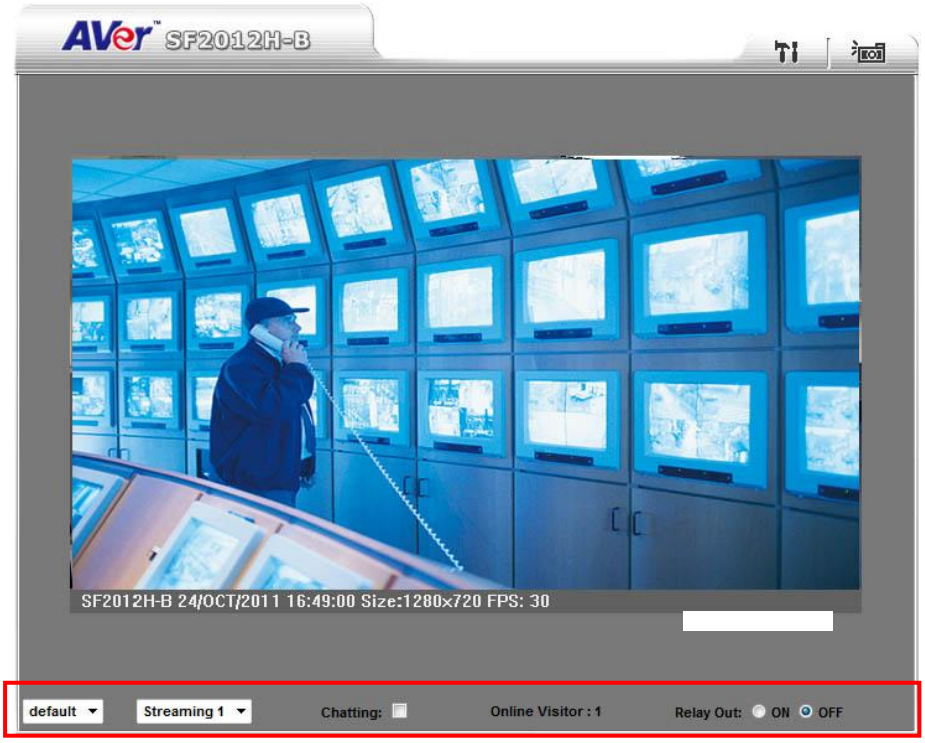
✓ Enable or Disable 3GPP Streaming.

✓ **3GPP:** 3GPP output name.

- **Audio:** IP CAMERA supports 2-way audio. User can send audio from IP Camera Built-in mic to remote PC; User can also send audio from remote PC to IP Camera's external speaker.
  - ✓ Audio from IP camera built-in mic to local PC: select "Enable" to start this function.



  - ✓ Audio from local PC to IP Camera: Check "chatting" in the browsing page.

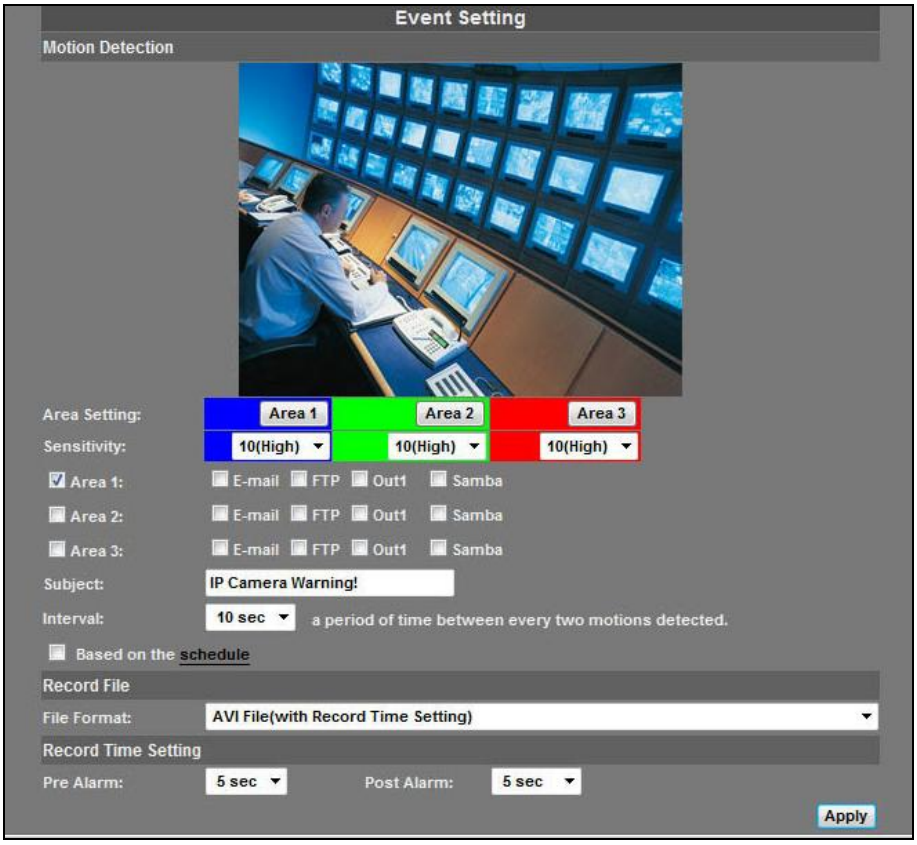


[Note] The Audio will not be smooth when enable SD card recording function simultaneously.

D. Event List

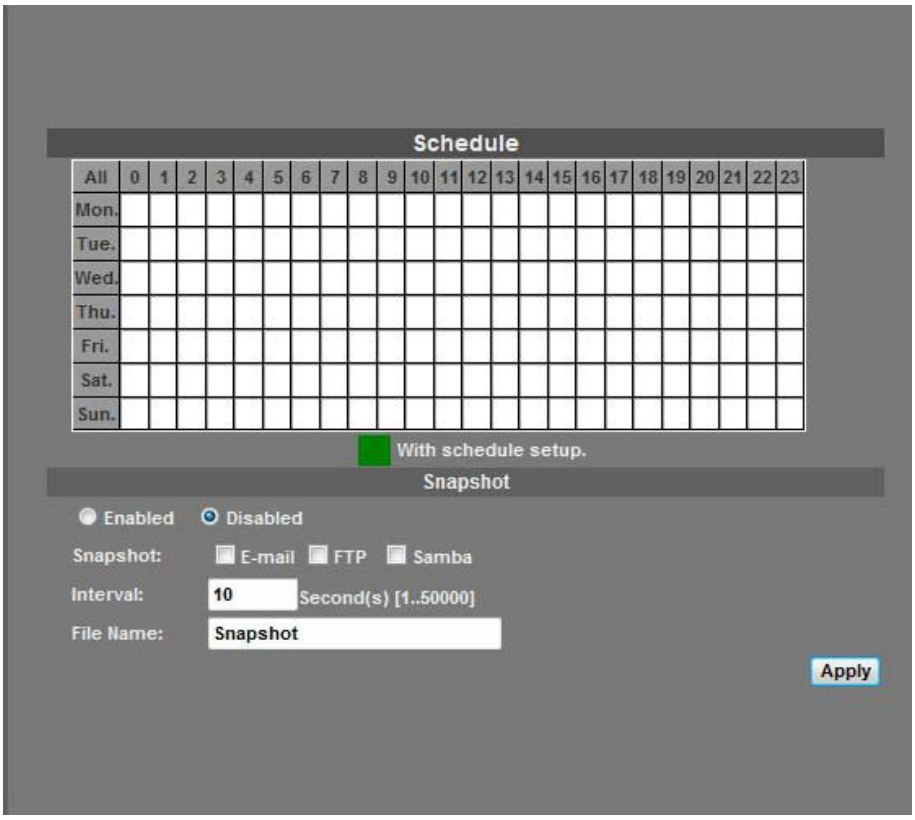
IP Camera provides multiple event settings.

■ Event Setting

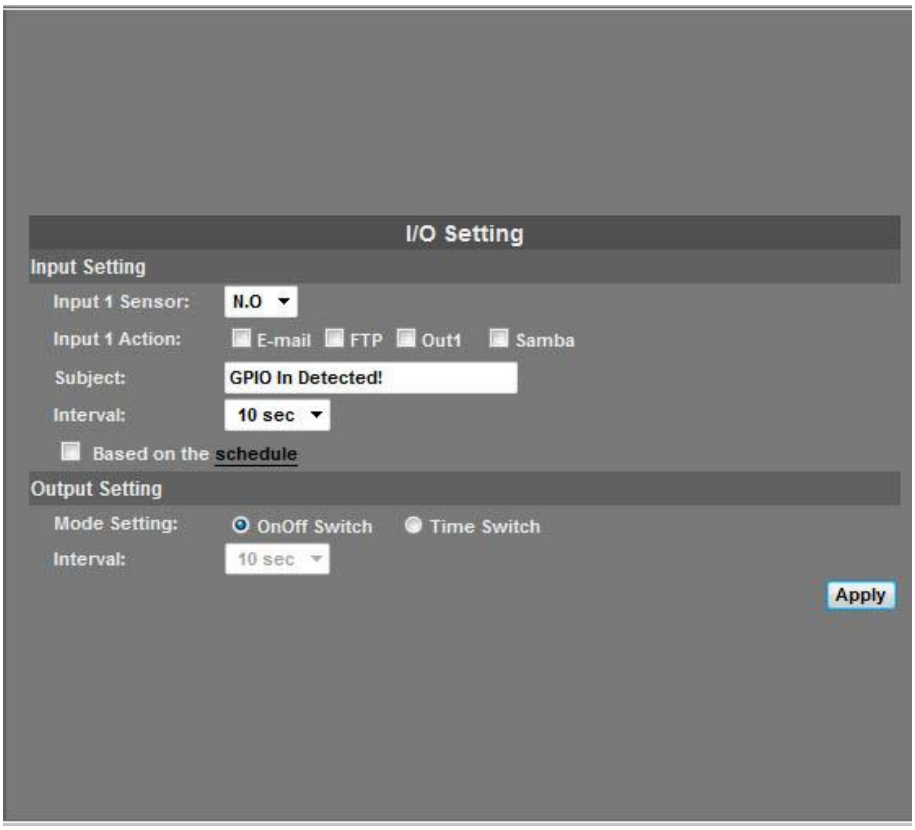


- ✓ **Motion Detection:** IP CAMERA allows 3 areas motion detection. When motion is triggered, it can send the video to some specific mail addresses, transmit the video to remote ftp server, trigger the relay, and save video to local SD card. To set up the motion area, click “Area Setting”. Using mouse to drag and draw the area. The same operation for area 2 and 3.
- ✓ **Record File Setting:** IP CAMERA allows 3 different types of recording file to change its record size. When motion/alarm is triggered, there are 3 different types of record mode.
  - ✓ AVI File (With Record File Setting)
  - ✓ Multi-JPEG (With Record File Setting), only with JPEG compression format.
  - ✓ Single JPEG (Single File with Interval Setting)
- ✓ **Record Time Setting:** Pre Alarm and Post Alarm setups for video start and end time when motion detected, I/O, or other devices got triggered.
  [Note] Pre/Post Alarm record time is base on record time setting and IP Cam built-in Ram memory. Limited by IP Cam built-in Ram Memory, When information is too much or video quality set too high, it will cause recording frame drop or decrease on post alarm recording time.
- ✓ **Network Dis-connected:** When the network is down, it will save the video to local SD card.
  [Note]This function is only enabled in wire connection.
- ✓ **Network IP check:** When the connection is down, it records the video to SD card. Make sure the video recording is continuous. To use this function, key in the IP address of the PC which has recording software installed. Enable the function of “Save to SD card”, then click “Apply”.
  [Note] The interval of two video files on SD card is fixed with 30 seconds.

- **Schedule**
  - ✓ **Schedule:** After complete the schedule setup, the camera data will be recorded according to the schedule setup.
  - ✓ **Snapshot:** After enable the snapshot function; user can select the storage position of snapshot file, the interval time of snapshot and the reserved file name of snapshot.



■ **I/O Setting:** IP CAMERA supports 1 input/1 output. When input is triggered, it can send the video to some specific mail addresses, transmit the video to remote ftp server, trigger the relay, and save video to local SD card.

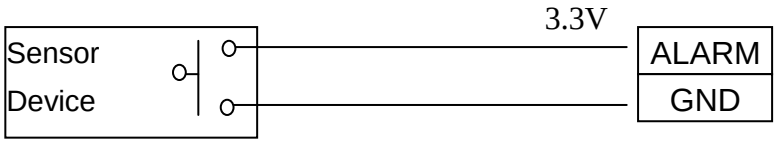


CATUTION!!

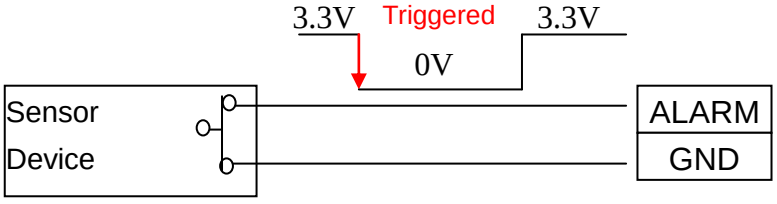
Please connect to propriety relay box to reduce the risk of electric shock & damaged.

✓ **Alarm Input Setting:** Among alarm input setting, the user can setup the connected device which can send the signal to “relay output” when the device is triggered.

(1) Non-Triggered



(2) Triggered



✓

✓ **Relay Output Setting:** In relay output setting, the user can setup the output device to perform the related output action.

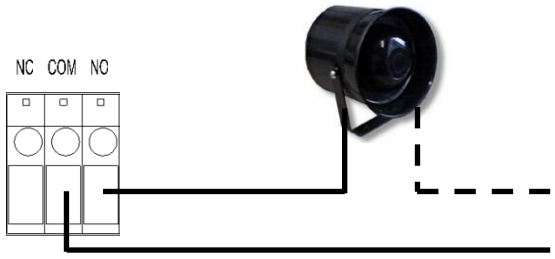
✓ **I/O PIN definition, please refer to the following statement**

ALARM	ALARM INPUT Standard Voltage: 3.3V (internal Voltage) Connect “ALARM” and “GND” two pins.
GND	
N.C.	RELAY OUTPUT Contact Rating: 30V DC/ 1A, 125V AC/ 0.3A Depends on the devices, the user should connect “N.C.” and “COM” pins or “N.O.” and “COM” pins
COM	
N.O.	

[Example]

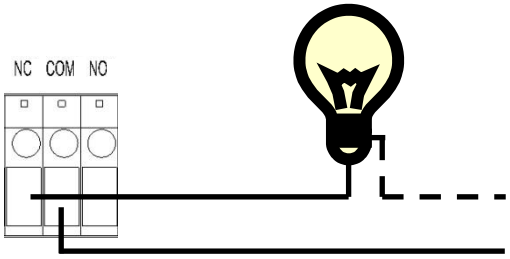
RELAY INSTALLATION EXAMPLE 1

Trigger a normal off (Normal Open) alarm siren on when event/motion occur at COM:



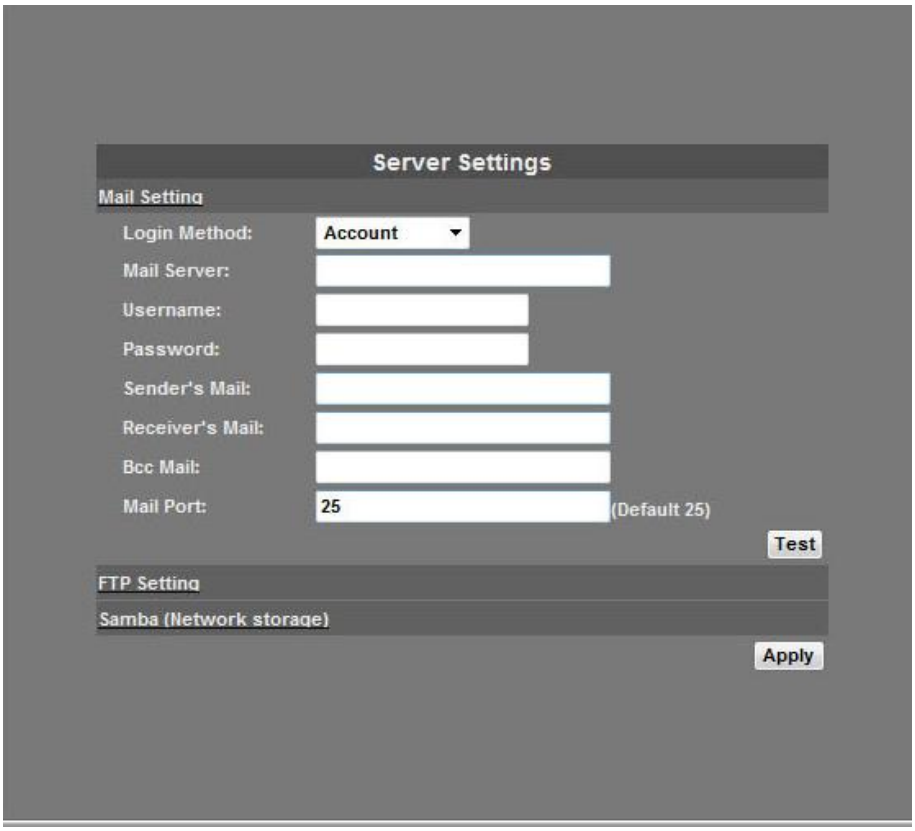
RELAY INSTALLATION EXAMPLE 2

Trigger the normal on (Normal Close) indoor illumination off when event / motion occur at COM:

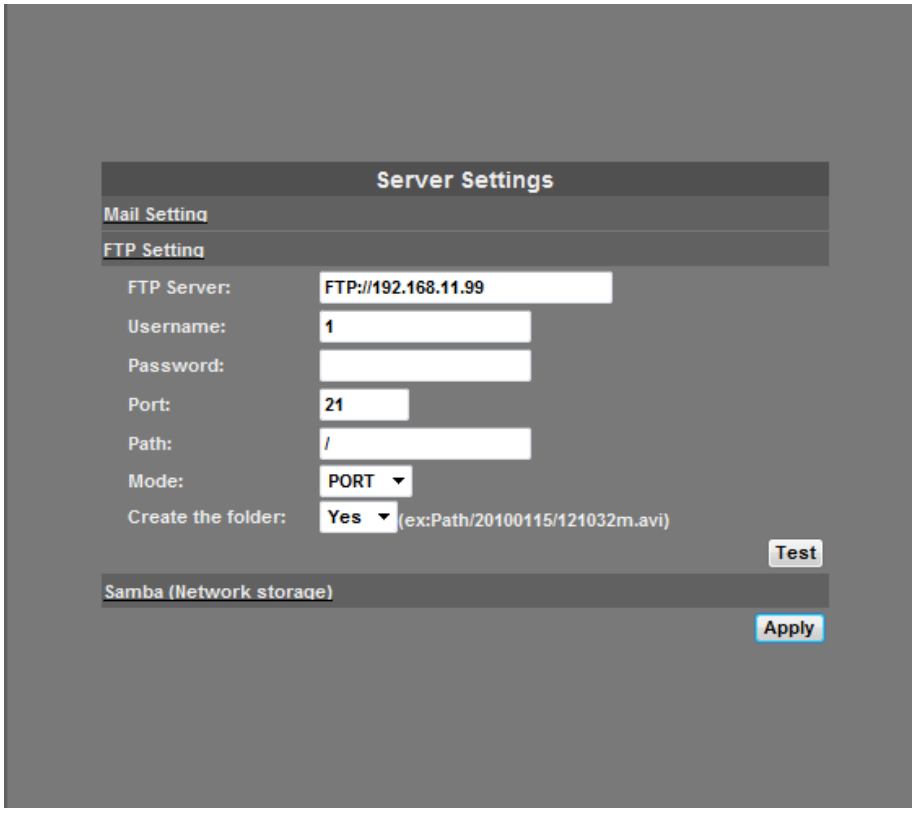


■ **Server Settings:** To send out the video via mail or ftp, please set up the configuration first.

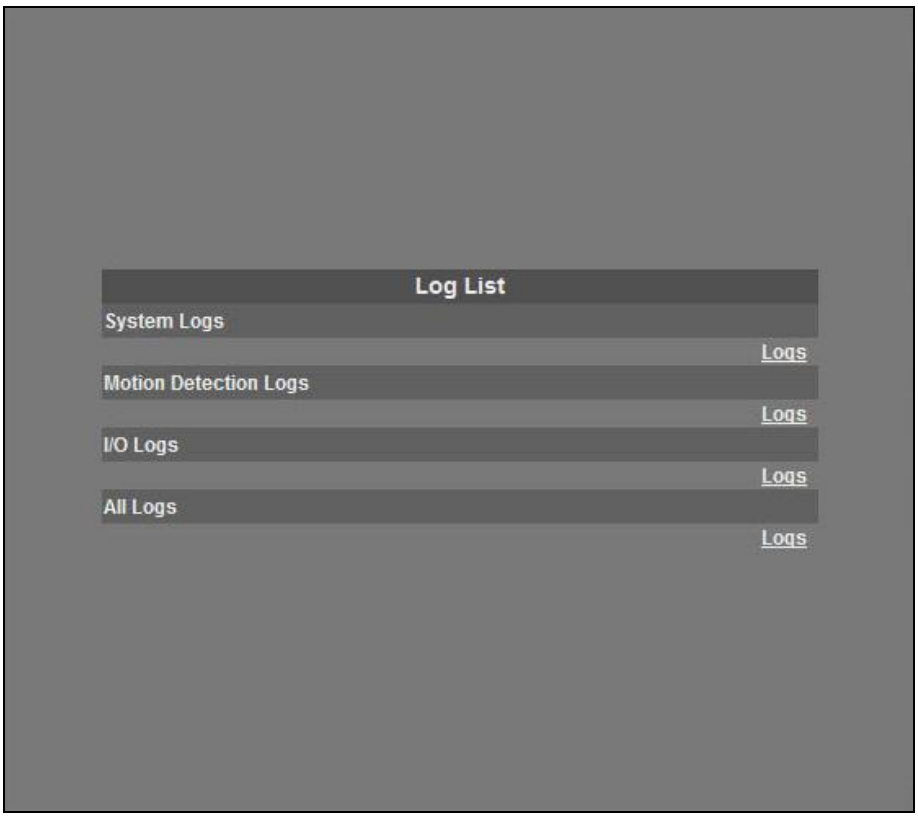
✓ **Mail Setting:** Enter the related data or information and click **test** button to test.



✓ **FTP Setting:** Enter the FTP information and test.



- **Log List**

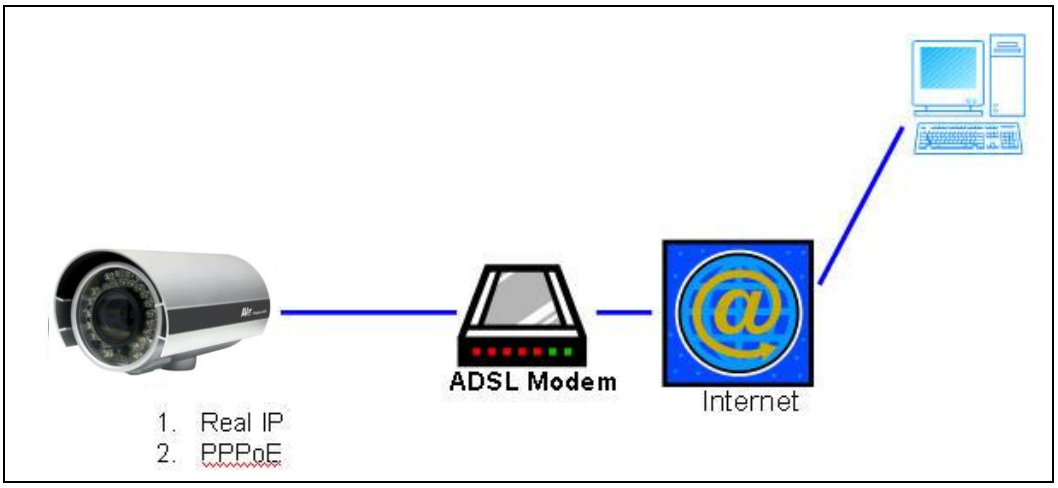


Sort by System Logs, Motion Detection Logs and I/O Logs. In addition, System Logs and I/O Logs won't lose data due to power failure.

- **SD card(Optional):** SD card will be inserted into the SF2012H-B camera before assembled. Please contact with your dealer if you want to replace the SD card.

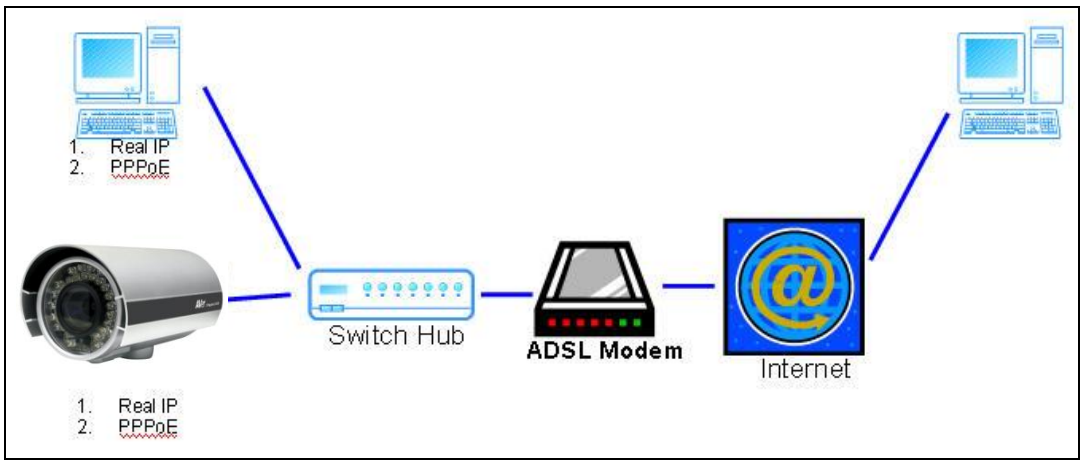
VI. Network Configuration

- Configuration 1



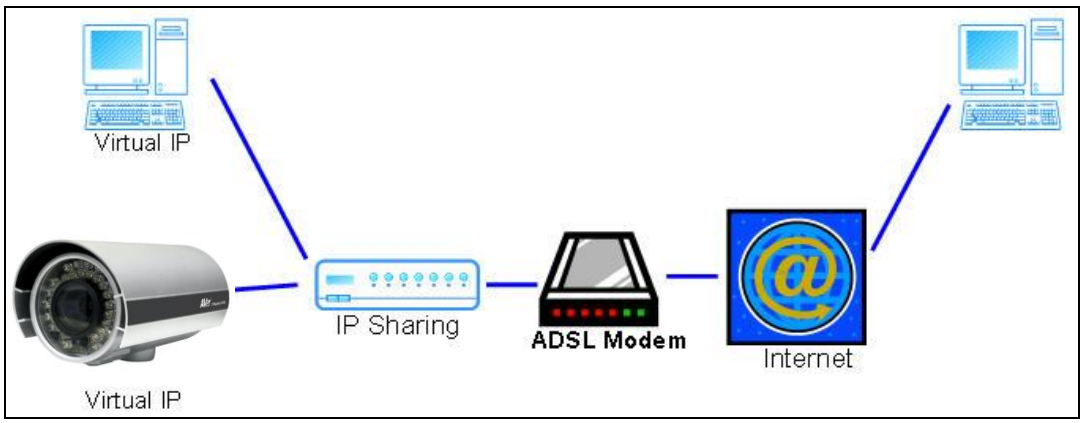
a. Internet Access：ADSL or Cable Modem
b. IP address：One real IP or one dynamic IP
c. Only IP CAMERA connects to the internet
d. For fixed real IP, set up the IP into IP CAMERA. For dynamic IP, start PPPoE.

- Configuration 2



a. Internet Access：ADSL or Cable Modem
b. IP address：More than one real IP or one dynamic IP
c. IP CAMERA and PC connect to the internet
d. Device needed：Switch Hub
e. For fixed real IP, set up the IP into IP CAMERA and PC. For dynamic IP, start PPPoE.

■ Configuration 3



a. Internet Access：ADSL or Cable Modem
b. IP address：one real IP or one dynamic IP
c. IP CAMERA and PC connect to the internet
d. Device needed：IP sharing
e. Use virtual IP, set up port forwarding in IP sharing.

VII. Factory Default

1. Removing an Ethernet cable.
2. Plugging “a pink default cable” into “GND”.
3. Plug power cable.
4. When camera starts again, please remove the pink default cable and plug Ethernet cable for new setting.
5. Release the button when camera finishes proceed.
6. Re-login the camera using the default IP (http://192.168.1.200), and user name (**admin**), password (**admin**).

VIII. Package contents

1. IP CAMERA Network Camera
2. Adaptor
3. Ethernet Cable
4. CD title (User manual, IP installation Utility)

Appendix I

SD Card Recommended：

Vendor	Test	Vendor	Test
ADATA 4G	passed	SiliconPower 128M	passed
ADATA 512M	passed	SiliconPower 256M	passed
Blast 128M	passed	TEKQ 128M	passed
GIGATEK 128M	passed	TEKQ 256M	passed
Kingmax 256M	passed	Toshiba 128M	passed
Kingston 128M	passed	Toshiba 256M	passed
Kingston 256M	passed	Toshiba 4G	passed
Kingston 512M	passed	Transcend 128M 80X	passed
Kingston 1G	passed	Transcend 256M 80X	passed
Kingston 32G	passed	Transcend 1G 80X	passed
Phast 256M	passed	Transcend 2G 150X	passed
Photofast 256M	passed	Transcend 4G 150X	passed
PK 128M	passed	Transcend 512M 80X	passed
PRETEC 128M	passed	Transcend 4G	passed
READY 128M	passed	Transcend 8G	passed
SanDisk 128M	passed	Transcend 16G	passed
SanDisk 256M	passed	Transcend 32G	passed
SanDisk 512M	passed	TwinMOS 128M	passed
SanDisk 1G	passed	TwinMOS 256M	passed
SanDisk 2G	passed	UMAX 128M	passed
SanDisk 4G	passed	U-TEK 128M	passed
SanDisk 8G	passed		
SanDisk 16G	passed		
SanDisk 32G	passed		

AVer Information Inc.
Taiwan & International
Web Site: http://surveillance.aver.com/